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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/846,157	04/30/2001	Gary Goldman	81862.P218	6017

7590   07/10/2006

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EXAMINER
LY, ANH VU H

ART UNIT	PAPER NUMBER
2616	

DATE MAILED: 07/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	**Applicant(s)**
Office Action Summary	09/846,157	GOLDMAN ET AL.
	Examiner	**Art Unit**	
	Anh-Vu H. Ly	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>*02 May 2006*</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Response to Amendment

1.   This communication is in response to the amendment filed on May 02, 2006. Claims 1-

24 are pending.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section
122(b), by another filed in the United States before the invention by the applicant for
patent or (2) a patent granted on an application for patent by another filed in the United
States before the invention by the applicant for patent, except that an international
application filed under the treaty defined in section 351(a) shall have the effects for
purposes of this subsection of an application filed in the United States only if the
international application designated the United States and was published under Article
21(2) of such treaty in the English language.

2.   Claims 1-2, 4, 6-8, 10, 13-14, 16, 18-20, and 22 are rejected under 35 U.S.C. 102(e) as

being anticipated by Chapman et al (US Patent No. 6,304,552 B1). Hereinafter, referred to as

Chapman.

With respect to claims 1, 7, 13, and 19, Chapman discloses a method comprising:

receiving data segments of at least one class of service (Fig. 1, class 1 and class 2 traffic

received at switches C and D) at each of a plurality of ingress line cards (Fig. 3, elements 302

and 304), each class of service having an associated guaranteed percentage of transmission

bandwidth (col. 9, lines 40-50 – class 1 traffic has reserved bandwidth without overflow while

class 2 traffic, which has reserved bandwidth with overflow);

marking a portion of the data segments of each class of service based on the associated

guaranteed percentage of the transmission bandwidth of the class of service (col. 9, lines 53-55 –

outgoing packets are tagged with HI or LO priority bit), such that if data transmitted from a class

of service exceeds the associated guaranteed percentage of the transmission bandwidth of the

class of service, then the number of data segments marked corresponds to the associated

guaranteed percentage of the transmission bandwidth of the class of service (col. 9, lines 53-55 –

outgoing packets are tagged with HI or LO priority bit. Herein, the marked data packets are

packets corresponding to the associated guaranteed percentage of transmission bandwidth of the

class of service only), and if data transmitted from a class of service is less than the associated

guaranteed percentage of the transmission bandwidth, then all the data segments of the class of

service are marked (col. 9, lines 30-32 – if the account result is less than its minimum bandwidth,

the queue's priority will be HI. This implies that if the output rate of the queue is less than the

allocated minimum bandwidth, all data packets, either class 1 or class 2 traffic, are marked as HI

priority); and

preferentially transmitting the marked data segments from each class of service (col. 9,

lines 62-67 – the controller will schedule data packet transmission for various queues so as to

move traffic from HI priority before LO priority. Herein, HI priority packets are packets of

either from class 1 and class 2).

With respect to claims 2, 8, 14, and 20, Chapman discloses transmitting unmarked data

segments from each class of service equally (col. 10, lines 25-28 - the controller 308 uses a

round-robin scheduling policy to schedule packet release permissions for LO request traffic

queues, as this ensures equal competition between all of these queues for any available spare

bandwidth. Herein, tagged LO packets are considered as unmarked data segments by examiner

since it is not in the same category of tagged HI packets).

With respect to claims 4, 10, 16, and 22, Chapman discloses that wherein the data

segments are data types selected from a group consisting of frame relay packet, voice

transmission data, IP packet, or circuit emulation service packet (col. 5, lines 65-67).

With respect to claims 6 and 18, Chapman discloses that wherein preferentially

transmitting the marked data segments includes guaranteeing the marked data segments are

transmitted prior to transmitting the unmarked segments (col. 9, lines 62-64 - the controller 308

will schedule data packet transmission for the various queues so as to move traffic from Hi

priority requests before traffic from LO priority requests. Herein, tagged LO packets are

considered as unmarked data segments by examiner since it is not in the same category of tagged

HI packets).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or
> described as set forth in section 102 of this title, if the differences between the subject
> matter sought to be patented and the prior art are such that the subject matter as a whole
> would have been obvious at the time the invention was made to a person having ordinary
> skill in the art to which said subject matter pertains. Patentability shall not be negatived
> by the manner in which the invention was made.

3.   Claims 3, 5, 9, 11-12, 15, 17, 21, 23, and 24 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Chapman et al (US Patent No. 6,304,552 B1) in view of Kusumoto (US Patent

No. 6,975,630 B1).

With respect to claims 3, 9, 15, and 21, Chapman discloses that data packets include IP

packets, Ethernet frames or data units in other arbitrary, proprietary format (col. 5, lines 65-67).

Chapman does not disclose that data packets are ATM cells. Kusumoto discloses an ATM

network for controlling ATM cells disposal according to its QoS (Fig. 5). Therefore, it would

have been obvious to one having ordinary skill in the art at the time the invention was made to

include ATM cells as data packets in Chapman's system, as suggested by Kusumoto, since ATM

networks are well known in the are known for carrying different prioritized traffic.

With respect to claims 5, 11, 17, and 23, Chapman discloses that wherein marking

includes implementing a must serve bit on the cells (col. 9, lines 53-55 - outgoing packets are

tagged to reflect the queue's priority status, through the state of a single bit in the packet header).

With respect to claims 12 and 24, Chapman discloses that wherein preferentially

transmitting the marked data segments includes guaranteeing the marked data segments are

transmitted prior to transmitting the unmarked segments (col. 9, lines 62-64 - the controller 308

will schedule data packet transmission for the various queues so as to move traffic from Hi

priority requests before traffic from LO priority requests. Herein, tagged LO packets are

considered as unmarked data segments by examiner since it is not in the same category of tagged

HI packets).

Response to Arguments

4.   Applicant's arguments filed May 02, 2006 have been fully considered but they are not

persuasive.

Applicant argues in page 7 that Chapman discloses marking all data packets within a

queue with a priority setting (HI or LO) data packets. Chapman is silent about and does not

teach or suggest a number of cells marked depending on the guaranteed bandwidth percentage

for the particular class of service. Examiner respectfully disagrees. First of all, independent

claim 1 does not recite a number of cells marked depending on the guaranteed bandwidth

percentage for the particular class of service. Instead, as recited in lines 5-6, "marking a portion

of the data segments of each class of service based on the associated guaranteed percentage of

the transmission bandwidth of the class of service", which is different from a number of cells

marked; data segments don't have to be cell packets. Secondly, as recited in line 5 of

independent claim 5 "marking a portion of the data segments", herein, a portion of the data

segments can be one packet, at least one packet, or all packets of the data segments. Examiner

takes on the position that a portion of the data segments refers to a full portion of the data

segments or all data packets of the data segments. Chapman discloses all data packets within a

queue are tagged with "HI" or "LO" (Fig. 5).

Applicant further argues in page 7 that Chapman does not disclose marking packets such

that if data transmitted from a class of service exceeds the associated guaranteed percentage of

the transmission bandwidth of the class of service, then the number of data segments marked

corresponds to the associated guaranteed percentage of the transmission bandwidth of the class

of service. This is a "if" and "then" statement; therefore "then the number of data segments

marked corresponds to the **exceeded** ... class of service". Since claim 1 recites the number of

data segments marked corresponds to the associated guaranteed percentage of the transmission

bandwidth of the class of service, it implies that all data packets are marked corresponding to the

associated guaranteed percentage of the transmission bandwidth of the class of service.

Assuming that claim 1 recites the number of data segments marked corresponds to the exceeded

guaranteed percentage of the transmission bandwidth of the class of service, Chapman discloses

that if the output rate of queue (data transmission rate) is greater than or equal to the maximum

bandwidth allocated, the queue is set to a LO priority setting. Herein, all packets are tagged with

LO (Fig. 5, block 516).

Applicant further argues in page 7 that Chapman does not disclose that if data transmitted

from a class of service is less than the associated guaranteed percentage of the transmission

bandwidth then all the data segments of the class of service are marked. Examiner respectfully

disagrees. Chapman discloses that if the output rate of the queue (data transmission rate) is less

than minimum allocated bandwidth, then the queue is set to a HI priority setting (Fig. 5, block

512). Herein, all data packets in the queue are tagged with a HI.

Conclusion

5.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing

date of this final action.

6.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Anh-Vu H. Ly whose telephone number is 571-272-3175. The

examiner can normally be reached on Monday-Friday 7:00am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Chi Pham can be reached on 571-272-3179. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

avl

CHI PHAM
SUPERVISORY PATENT EXAMINER   7/6/06